

**Problem:** Kermes Oak Scale - *Kermes spp.*



**Hosts:** Primarily pin and bur oaks but other oaks may be affected.

**Description:** There are two different oak kermes species that are common in Kansas.

**Bur Oak Kermes:** This one has been commonly seen on bur oak. Overwintering nymphs attack newly expanding leaves in April and cause the mature leaves to be distorted. New crawlers appear in June.

**Pin Oak Kermes:** The oak kermes scale commonly found on pin oak has a bit different life cycle. Eggs hatch in September rather than June. This kermes scale appears to cause much more damage than the one on bur oak. Terminal growth can be killed outright or the union between terminal growth and last year's growth may be weakened so that July winds can cause terminal growth to break off.

**Recommendations:** Many people don't treat for Kermes scale and let natural controls build up. If people still wish to use insecticides, timed sprays can be used that target the crawlers or a systemic may be used (see below). Recommendations for timed sprays differ depending on the oak kermes species present. Insecticidal sprays should target the crawlers before they form their protective "shell."

**Bur Oak Kermes (timed sprays):** Insecticides may be sprayed in April as overwintering nymphs become active and/or in June when crawlers are active.

**Pin Oak Kermes (timed sprays):** Insecticidal sprays should be applied in September when the crawlers are active.

Biorational sprays such as an ultra fine oil or an insecticidal soap can also be used when the crawlers are active. These sprays have a low to moderate impact on natural enemies of scales such as parasitic wasps. You can also use cyfluthrin (Bayer Vegetable and Garden Spray, Tempo) or acephate (Orthene).

**Systemic Control:** Apply imidacloprid in the fall. Imidacloprid is the active ingredient in Merit 75WP (commercial) and Bonide Annual Tree and Shrub Insect Control, Fertilome Tree & Shrub Systemic Insect Granules, Bayer 12 Month Tree & Shrub Insect Control (homeowner). Ohio State has verified the effectiveness of fall application treatments for soft scales including kermes scale. They suggest applying imidacloprid from mid-October to late November to control insects the following spring to early summer. The imidacloprid is applied as a drench at the base of trees. Mulch and litter should be removed to allow good penetration of the product. Hard soils may need temporary dikes to allow the material to soak in rather than running off.

### **References:**

1. [Scale Insects on Shade Trees and Shrubs](#), Purdue University Cooperative Extension Service, Publication E-29
2. Life Histories of Common Insects, Mites and Nematodes Infesting Ornamental Plants in Missouri, Missouri Department of Agriculture, pg D-9
3. Garden Insects of North America, Princeton University Press, pg 342

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